

EPSRC CDT in Intelligent Sensing and Measurement

Annual Conference

28th November 2017 - The Royal Society of Edinburgh

The Royal Society of Edinburgh | 22-26 George Street | EH2 2PQ Edinburgh

PROGRAMME

09:00 – Registration and Coffee

Session 1 – Prof Andy Harvey

09:30 – Welcome

Prof Alan Miller, SUPA CEO

09:40 – A Journey from Sand through Silicon to Sensors

Prof Anthony Walton, University of Edinburgh

4th Year CDT-ISM Students Oral Presentations

10:10 – Radiation Detection & Particle Discrimination with novel Scintillators & Silicon Photomultipliers

Francis Thomson, University of Glasgow

10:20 – Microscopy with Liquid Crystal Lasers

Margaret Normand, University of Edinburgh

10:30 – A High Stability Optical Shadow Sensor with Applications for Precision Accelerometers

Steven Bramsiepe, University of Glasgow

10:40 – DIY Acoustic Spanner (Video)

Ermes Toninelli, University of Glasgow

10:43 – Tea and Coffee

Session 2 – Chiara Garbellotto

11:25 – Nanosensor Probes for High-Resolution Electrochemical Imaging

Dr Andy Wain, NPL

4th Year CDT-ISM Students Oral Presentations Continued

12:05 – Towards a Simple, Label-Free Sensing System for the Investigation of Origin of Life Chemistry

David Doran, University of Glasgow

12:15 – THz Holography

Mark Humphreys, University of Glasgow

2nd Year CDT-ISM Student Poster Pitches

12:25 - Gigapixel Microscopy via Computational Imaging

Tomas Aidukas, University of Glasgow

12:26 - Photonic Crystal Fibres for Chemical Sensing and Photochemistry

Sergio Bermudez, University of Edinburgh

- 12:27 - Detection of Thermal Neutrons with MAPMTs and Novel Glass Scintillator**
Laura Boyd, University of Glasgow
- 12:28 - Development of a Point-of-care Sensor for Thyroid Disease Monitoring**
Giulia Deiana, University of Edinburgh
- 12:29 - Sensing and Measurement of Redox Modifications in Proteins**
Laurentis Galanopoulos, University of Edinburgh
- 12:30 - Chiral Metamaterials for Biological Sensing**
Cameron Gilroy, University of Glasgow
- 12:31 - CMOS Sensor Technology for the Detection of the Metabolome**
Jose Cortes Guzman, University of Edinburgh
- 12:32 - Structured Light for Microscopy**
Ryan Hawley, University of Glasgow
- 12:33 - Towards Imaging Cell Metabolism in the Retina**
Julia McFarlane, University of Glasgow
- 12:34 - Investigation into the Fundamental Behaviour of Hydrogen Fluoride Vapour Etching**
Markus Ronde, University of Edinburgh
- 12:35 - Developing an Integrated Sensing Capability for Astrobiology**
Yuchen Shang, University of Edinburgh
- 12:36 - Electrochemical Detection of Dopamine using a Paper-Based Microfluidic Platform**
Anastasios Vilouras, University of Glasgow

12:40 - Lunch

Session 3 – Prof Ian Underwood

13:50 – Talk title TBC

Dr Josephine Bunch, Dr Rory Steven, NPL

4th Year CDT-ISM Students Oral Presentations Continued

14:20 - Wavelength-Domain Referencing for an Optical Biosensor

Joseph Bronstein, University of Glasgow

14:30 - Compliant Metal Strain Gauges on Polymer Substrates

Zakareya Hussein, University of Glasgow

14:40 – Nanoelectrode Sensor Development for Pyroprocessing

Hannah Levene, University of Edinburgh

14:50 – Collectively Revolutionising Robot Swarms: A Sensing Perspective (Video)

Markus Nemitz, University of Edinburgh

14:53 – Structural Characterisation of Sensor Materials

Alastair Doye, University of Glasgow

15:03 - Fluorescence for Cancer Detection (Video)

Claudio Accarino, University of Glasgow

15:06 – Tea and Coffee

Session 4 – Margaret Normand

15:35 - A Digital future for forging? - Instrumentation challenges in moving the dial on traditional manufacturing processes.

Dr Michael Ward, Technical Director, Advance Forming Research Centre

3rd Year CDT-ISM Student 3 Minute Thesis/Video

16:05 - The Fantastic Voyage of the Microrobots

Jennifer Dodoo, University of Edinburgh

16:08 - Using Oxygen Saturation as a Contrast Agent for Angiography

Ross Drysdale, University of Glasgow

16:11 - 3D Microscopy (Video)

Chiara Garbellotto, University of Glasgow

16:14 - Is it love? Possibly an Intracranial Hematoma

Callum MacArthur, University of Edinburgh

16:17 - MEMS Gradiometer for Attitude Control on CubeSats

Giovanna Marocco, University of Glasgow

16:20 - Fluorescence Imaging in a Capsule (Video)

Gianluca Melino, University of Glasgow

16:23 - Micro-Optic Resonator Gyroscope

Martin Sinclair, University of Glasgow

16:26 - Biointegration of Implanted Sensors

Paul Sullivan, University of Edinburgh

16:29 Advanced & Computational Imaging in Microendoscopy (Video)

Stuart Wilson, University of Glasgow

16:32 Integrated Electrochemical Sensors for Smart Contact Lenses

Matthew Donora, University of Edinburgh

16:40 - Close